

Title (en)
PROCESS AND DEVICE FOR MEASURING THE GELLING OF PARAFFIN PETROLEUM PRODUCTS, IN PARTICULAR, CRUDE OIL.

Title (de)
VERFAHREN UND VORRICHTUNG ZUR MESSUNG DER GELIERUNG PARAFINISCHER PETROLPRODUKTE, INSBESONDERE ROHÖL.

Title (fr)
PROCEDE ET DISPOSITIF DE MESURE DE LA GELIFICATION DE PRODUITS PETROLIERS PARAFFINIQUES, NOTAMMENT BRUTS.

Publication
EP 0480980 B1 19931027 (FR)

Application
EP 90910770 A 19900626

Priority
FR 8908888 A 19890703

Abstract (en)
[origin: WO9100516A1] The invention relates to a process and a device for measuring the gelling of paraffin petroleum products, in particular, crude oil. The process involves: measuring, with respect to the temperature and over a given thickness, the propagation velocity and the amplitude of an ultrasonic wave in the crude oil being analysed; then determining the transition temperature T_t, at which a sudden change in the thermal variation in the inverse of the propagation velocity is observed; determining the ratio of the slopes for the propagation velocity inverse obtained between the linear parts of the thermal variation of said propagation velocity, around said break point corresponding to T_t, above and below, respectively, the determined temperature T_t; determining the ultrasonic signal amplitude difference DELTA A between the temperature T_t and a given lower reference temperature, for example T_t-5 DEG C.

IPC 1-7
G01N 29/02

IPC 8 full level
G01N 25/04 (2006.01); **G01N 29/00** (2006.01); **G01N 29/02** (2006.01); **G01N 29/22** (2006.01); **G01N 29/32** (2006.01); **G01N 33/22** (2006.01); **G01N 33/26** (2006.01); **G01N 33/28** (2006.01)

CPC (source: EP US)
G01N 29/02 (2013.01 - EP US); **G01N 29/222** (2013.01 - EP US); **G01N 29/326** (2013.01 - EP US); **G01N 33/28** (2013.01 - EP US); **G01N 2291/011** (2013.01 - EP US); **G01N 2291/015** (2013.01 - EP US); **G01N 2291/0251** (2013.01 - EP US); **G01N 2291/02854** (2013.01 - EP US); **G01N 2291/02881** (2013.01 - EP US)

Cited by
CN103582814A

Designated contracting state (EPC)
BE DE ES GB IT NL

DOCDB simple family (publication)
WO 9100516 A1 19910110; AU 5961290 A 19910117; CA 2062948 A1 19910104; DE 69004259 D1 19931202; DE 69004259 T2 19940505; EP 0480980 A1 19920422; EP 0480980 B1 19931027; ES 2045937 T3 19940116; FR 2649206 A1 19910104; FR 2649206 B1 19930205; JP H04506406 A 19921105; US 5247828 A 19930928

DOCDB simple family (application)
FR 9000472 W 19900626; AU 5961290 A 19900626; CA 2062948 A 19900626; DE 69004259 T 19900626; EP 90910770 A 19900626; ES 90910770 T 19900626; FR 8908888 A 19890703; JP 50999090 A 19900626; US 83452292 A 19920207